

BOBRIK, I.P.

"Automation of production in the food industry" by D.I.Skoblo, .
I.P.Glybin, E.N.Peretiatko. Reviewed by I.P.Bobrik. Spirt. prom.
24 no.6:44-45 '58. (MIRA 11:10)
(Food industry--Equipment and supplies)
(Automatic control) (Skoblo, D.I.) (Glybin, I.P.)
(Peretiatko, E.N.)

BOBRIK, I.P.

Symposium on distillation in Brighton (England) (from "Chemical Age,"
no.2132, 1960). Spirt.prom. 27 no.3:36-37 '61. (MIRA 14:4)
(Distillation--Congresses)

BOBRIK, I.P.

Manufacture of edible oil from corn germs (from "Die Staerke,"
no.7, 1961). Sakh.prom. 36 no.4:62-64 Ap '62. (MIRA 15:5)
(Corn oil)

BOERIK, I.P.

Starch industry in Yugoslavia (from "Die Staerke," no.8, 1861).
Sakh.prom. 36 no.4:64-65Ap '62. (MIRA 15:5)
(Yugoslavia--Starch industry)

BOBRIK, I.P.

Characteristics of yeast growth during fermentation under aeration
conditions (from "Branntweinwirtschaft," no.16, 1962). Spirt.prom.
29 no.4:41-43 '63. (MIRA 16:5)

(Yeast)

BOBRIK, I.P.

Manufacture of bakers' yeast in a concentrated solution of molasses.
Spir. prom. 29 no.5:37-38 '63. (MIRA 17:2)

BOERIK, I.P.

Propagation of yeast and yield of alcohol during alcohol fermentation. Spirt. prom. 29 no.8:36-37 '63.

Effect of the temperature of fermentation on the yield of alcohol and nitrogen content of settled yeast. Ibid.:37-40 (MIRA 17:2)

BOBRIK, I.P.

Purification of waste waters in the Gmünd Starch Plant. Sakh.-
prom. 37 no.7:73-74 J1 '63. (MIRA 16:7)
(Gmünd (Austria)--Industrial wastes--Purification)

BOBRIK, I.P.

Effect of the supplementary molasses addition on the quality
of yeast. *Ferm. i spirt. prom.* 30 no.2:35-36 '64.

(MIRA 18:2)

BOBRIK, I.P.

Yeast propagation and alcohol yield during fermentation. Effect of mash concentration and of yeast strains; abstract. Fern. i spirt. prom. 30 no.5:37-41 '64.

(MIRA 17:10)

BOBRIK, I.P.

Impressions from the Universal Brewery Exhibition held in
Chicago in October 1962. Spirt. prom. 29 no.7:42 '63.

(MIRA 16:12)

BOBRIK, P. I.

"Effect of the quality of Working of Metals on the Rigidity of Loaded Joints." Sub 3 Jul 47, Moscow Aviation Tedhnological Inst

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

BOBRIK, P. I.

Bobrik, P. I. - "The relation between the flat butt joints and the degree of surface finishing," Trudy Mosk. aviats. tekhnol. in-ta, Issue 5, 1949, p. 55-99, - Bibliog: 19 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

BOBRIK P.I.

BOBRIK, P.I., kandidat tekhnicheskikh nauk

Calculating the heat field in cutting metals. Trudy MATI no.24:
42-68 '54.

(MLRA 8:10)

(Metal cutting)

BOBRIK, P.I.

KASHIRIN, A.I.; GRIKHNO, G.P.; BOBRIK, P.I.; ZAMOROV, D.F.

Investigation of adjustable tool attachment used in surface
machining. Trudy MATI no.24:69-79 '54. (MIRA 8:10)
(Machine tools)

BOBRUK, P. I.

BOBRUK, P. I., Kandidat tekhnicheskikh nauk, dotsent.

Accuracy of the relation $v-T$ in case of its determination by the
method of face cutting. Trudy MATI no.32:131-138 '57. (NLRA 10:8)
(Metal cutting)

Bobrik, P. I.

AUTHOR: Bobrik, P. I.

119-1-6/13

TITLE: . Classification of Technological Processes According to Their Degree of Automation (Otsenka tekhnologicheskikh protsessov po stepeni ikh avtomatizatsii)

PERIODICAL: Priboroostroyeniye, 1958, Nr 1, pp. 17-20 (USSR)

ABSTRACT: The use of automation also in the technology of mechanical metal treatment makes it more and more difficult to put up and find objective criterious and methods to determine the degree of automation. First it is necessary to precize the terms "Mechanization" and "Automation". Mechanization is the taking of measures in order to have a hand-done working process performed by machines. Automation is the taking of measures in order to have the control operations which are done by hand performed by machines.

An automation coefficient is introduced which expresses the ratio between the number of automized and that of the total amount of operation processes. This coefficient does, however, not characterize the difficulty of operations automized.

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The magnitude Z_A which is also called automation number

Classification of Technological Processes According to
Their Degree of Automation

119-1-6/13

characterizes the number of automatized operation processes, but only the number of control operations. If Z_{NA} is additionally added as number of not automatized processes, the following ratios are valid:

$$\eta_A = \frac{Z_A}{Z} \quad \text{and}$$

$$Z = Z_A + Z_{NA}$$

Thus it is possible to describe the automation of an operation process both qualitatively and quantitatively.

Furthermore the operation processes are divided into 10 different classes in which case η_A changes from 0 - 0,5 = class 0 to 0,998 - 1,0 = class 9.

By means of a concrete example the author shows how the classification method stands the test. There are 3 figures, 2 tables & 4 references, all of which are Slavic.

AVAILABLE: Library of Congress

Card 2/2

1. Technological processes-Classification 2. Automation

BOBRIK, P.I., kand.tekhn.nauk, dotsent

Reading device for metal cutting machine with programmed control.
Trudy MATI no.45:129-138 '60. (MIRA 14:1)
(Metal cutting) (Automatic control)

S/121/61/000/012/005/007
D040/D112

AUTHORS: Daniyelyan, A.M., and Bobrik, P.I.
TITLE: Peculiarities of the heat phenomena in cutting refractory alloys
PERIODICAL: Stanki i instrument, ³²no. 12, 1961, 25-27

TEXT: The article describes an experimental investigation of the heat balance, i.e. the amount of heat absorbed by the chip, tool and workpiece (Q_{chip} , Q_{tool} , and $Q_{\text{workpiece}}$), in cutting ~~3H~~867 (EI867) and ~~3H~~827 (EI827) refractory alloys, which possess great mechanical strength, particularly at high temperatures. Solid cutters of ~~BK~~8 (VK8) alloy were used in the tests. The total amount of liberated heat was determined by the value of the work expended in the cutting process. A dynamometer was used for measuring the tangential component of the cutting force; the force component in the feed direction was ignored in view of its insignificant value. Q_{chip} , Q_{tool} and $Q_{\text{workpiece}}$ were determined by measuring the temperature of water in calorimeters of different shapes and sizes. The effect of the feed, cutting speed and cutting depth on the heat balance was studied in three separate series.

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Peculiarities of the ...

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of experiments. Increasing the cutting speed, increased the proportion of Q_{chip} and reduced that of $Q_{\text{workpiece}}$ and Q_{tool} in both alloys, although the absolute values of all three components increased. At low cutting speeds, the quantity of heat absorbed by the chip was above 40%, a fact not previously mentioned in the literature. Increasing the feed also increased the proportion of Q_{chip} , which was partly due to the diminished contact area between the chip and the cutter, but the absolute values of Q_{tool} and $Q_{\text{workpiece}}$ also increased. The cutting depth had less effect on the heat balance expressed in % than either the feed or cutting speed, but increasing the cutting depth increased the absolute values of Q_{chip} , Q_{tool} and $Q_{\text{workpiece}}$ to a much greater extent than increasing the feed or cutting speed. It is pointed out that the values of Q_{tool} and $Q_{\text{workpiece}}$ expressed in % were 2-3 times higher for the EI867 and EI827 alloys than for the EI437 refractory alloy. Conclusions: (1) The high percentage of heat transferred to the workpiece and the cutter is characteristic in cutting EI827 and EI867 alloys; (2) Low cutting speeds must be used in view of the high cutting temperature recorded in the tests (2-4 times above the temperature reached when cutting machinery steels); (3) The proportion (and absolute quantity) of heat

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Peculiarities of the ...

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transferred to the chip, rises abruptly when the feed and cutting speed are increased; (4) The heat balance for the EI827 and EI867 alloys may be characterized by the following mean values when $s = 0.12$ mm/rev and $t = 1.5$ mm):

Heat transfer	Amount of heat in % at v (in m/min).	
	3 - 15	15 - 25
Into the chip ...	25	45
Into the workpiece ...	45	35
Into the cutter ...	30	20

(5) Measures have to be taken to lower the temperature in the cutting zone, e.g. by cooling. There are 7 figures and 3 Soviet references.

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S/536/62/000/053/001/002
1048/1248

AUTHORS: Daniyelyan, A. M., Doctor of Technical Sciences, Prof., and Bobrik, P. I., Candidate of Technical Sciences, Docent

TITLE: Some problems of the physics of cutting of refractory alloys

PERIODICAL Moscow. Aviatsonnyy tekhnologicheskiiy institut. Trudy, no. 53, 1962, Issledovaniya v oblasti mekhanicheskoy obrabotki metallov 8-22

TEXT: Physical phenomena associated with the cutting of a Ni-Cr-Al alloy (alloy A) and a Ni-Cr-Al-Co alloy (alloy B) were studied. The hardness of these alloys increased after application of high pressures, e.g., the hardness on the surface of a Brinell indentation impression (3000 kg. load) was 9-12 Rockwell units higher than that on the remaining surface of the specimen. The force required for cutting increased with increasing rates of feeding and was generally 2-3 times as high as that required for the cutting of conventional construction steels. The cutting force decreased sharply with increasing cutting velocity. The cutting temperature was 300-400° at a cutting velocity of 2-3 m./min., and 1000° m./min. The main factor affecting the cutting temperature was the cutting velocity; the rate of feeding and the cutting depth were of little importance. The relative amounts of heat transferred to the specimen and the cutter decrease, while that transferred to the shavings increases with increased cutting velocity. Sample values for the distribution of the heat evolved during cutting at a velocity of 3-15 m./min., a feeding of 0.12 mm./turn, and a cutting depth of 1.5 mm are: to the specimen 45%, to the cutter 30%, and to the shavings 25% of the total. There are 22 figs. and 2 tables.

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L 27906-65 EWP(w)/EWT(m)/EWA(d)/EPT(n)-2/EMP(t)/T/ET(K)/EMP(1)/ETP(b)
 PP-l/Pu-l IJP(c) JD/HW/JG

ACCESSION NR: AT5001352

S/2536/64/000/060/00B/0032

41
 35
 B+1

AUTHOR: Bobrik, P. I. (Candidate of technical sciences, Docent)

TITLE: Study of the cold-hardened layer during the mechanical working of heat-resistant alloys and an analysis of its effect on strength

SOURCE: Moscow. Aviatsonnyy tekhnologicheskii institut. Trudy, no. 60, 1964. Povysheniye resursa raboty aviatsonnykh detaley tekhnologicheskimi sredstvami (Increasing the efficiency potential of aircraft parts by technological procedures), 19-32

TOPIC TAGS: cold hardening, microscopic hardness, heat resistant alloy, alloy strength, alloy hardness, metal machining, lithium alloy

ABSTRACT: This article deals with a study of the parameters of the cold-worked layer obtained in the turning of two heat-resistant lithium alloys, designated as alloy "D" and alloy "S". Cylindrical samples were investigated (diameter: 25-38 mm, length: 90 mm). These samples were turned on a 1K62 screw-cutting lathe with a one-piece cutting tool of hard VK8 alloy. Preceding the main body of the article, the author provides a concise review and critical commentary of a fairly

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large number of published works dealing with the study of the cold-hardening of the surface layer obtained in machining and its effect on the strength characteristics of the metal. Two diametrically opposite views are considered: the hypothesis that cold-hardening, both throughout the entire section of the metal and on the surface (from mechanical working), leads to an acute reduction in fatigue strength, and the opposing view which, in its most categorical form, holds that the cold-hardening associated with mechanical working can increase all the strength properties of metals both at room and at higher temperatures. The numerous parameters affecting surface layer quality are reviewed, and the point is made that the equation "cold-hardening of surface layer = strength" can be established with satisfactory reliability only if there is constancy of all these parameters. The origin of the contradictory theories on the subject is seen in the fact that this condition was not observed in a single one of the studies previously published. In the study reported upon in this paper, the value of the cold-hardening was measured by a microscopic hardness testing device^{PM-3} on plates 5 - 8 mm in width. The micro-hardness meter is pictured and described in the article, and its operational principle is explained. The samples were lapped with rods having a No. 500 granularity index and electrolytically polished (in two electrolytes) in order to remove the fine cold-hardened layer formed as a result of the lapping and to improve surface quality; the cylindrical part of the sample was

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covered with paraffin in advance in order to prevent the edges from crumbling. The machining conditions are given as follows: current density: 40 amps/dm²; voltage: 25 v; temperature: 25-40C; time of polishing: 1 minute; thickness of layer removed: 10-15 mc. The mathematical formulae used in determining the parameters of interest (depth of layer corresponding to point at which micro-hardness was measured, depth of cold-hardening h_c , and degree of cold-hardening $h\%$) are derived in the text. In all the experiments, the depth and degree of cold-hardening were determined on the basis of the analysis of the "cold-hardening depth-distribution curve", several of which are shown in the article. In all cases the curves were identical, the difference between individual curves being merely quantitative in character. A characteristic peculiarity of these curves is the great dispersion of the experimental points; in certain cases, this dispersion overlaps a considerable portion of the micro-hardness test range. Considerations are given in the article to a quantitative estimate of the error factor inherent in the tests, and the latter is given as 10-20% for the determination of the degree of cold-hardening. Of the many factors which influence the cold-hardening of the surface layer, only two are considered in this paper: the feed and the speed of cutting (the depth of the cut was taken as constant: 1.5 mm). The feed was found to have the greatest effect on the depth and degree of cold-hardening, with

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an increase in the feed rate being almost directly proportional to an increase in depth for both alloys. The function of the degree of cold-hardening is more complex and varies within a wide range: from 30 to 85% for one alloy and from 75 to 135% for the other. The cutting speed had no meaningful effect on the depth of cold-hardening, but did affect the degree of hardening. "The work was carried out under the scientific supervision of Prof. A. M. Daniyelyan (Dr. Tech. Sci.; Honored scientific worker and technician of the RSFSR), with the cooperation of I. N. Nikitin, R. V. Solenov and V. N. Dayav." Orig art has: 6 formulas, 2 tables and 7 figures.

ASSOCIATION: Moskovskiy aviatsionnyy tekhnologicheskij institut (Moscow aeronautical engineering institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 007

OTHER: 001

Card 4/4

DANIYEL'YAN, Arutyum Mkrtichevich, zasl. deyatel' nauki i tekhniki
RSFSR, doktor tekhn. nauk, prof.[deceased]; BOBRIK, Petr
Ivanovich; GUREVICH, Yankel' Leybovich; YEGOROV, Ivan
Sergeyevich; VASIL'YEV, D.T., kand. tekhn.nauk, retsenzent

[Machining heat resistant steels and alloys and high melting
metals] Obrabotka rezaniem zharoprochnykh stalei, splavov i
tugoplavkikh metallov. Moskva, Mashinostroenie, 1965. 306 p.
(MIRA 18:5)

DANIYELIAN, A.M. [deceased]; BOBRIK, P.I.

Some problems of heat generation and dynamics in cutting heat-resistant casting alloys. Trudy MATI no.60:5-18 '64. (MIRA 17:11)

L 3513-66

EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b) IJP(c) JD/JG

AM5019283

BOOK EXPLOITATION UR/

UDK621.90:669.14.018.44

Daniyelyan, Arutyum Mkrtichevich (Doctor of Technical Sciences; Professor); Bobrik, Petr Ivanovich; Gurevich, Yankel' Leybovich; Yegorov, Ivan Sergeyevich

Machining heat-resistant steel, alloys and refractory metals (Obrabotka rezaniyem zharoprochnykh staley, splavov i tugoplavkikh metallov) Moscow, Izd-vo "Mashinostroyeniye", 1965. 306 p. illus., biblio. Errata slip inserted. 5700 copies printed.

TOPIC TAGS: machining, heat resistant steel machining, refractory metal machining, heat resistant alloy machining, titanium alloy machining, beryllium machining, rare metal machining

PURPOSE AND COVERAGE: This book is intended for engineering personnel of machine-building plants, scientific research institutes, and engineering design bureaus. It may also be useful to students of schools of higher technical education specializing in technology. The book reviews specific technological features and aspects of various procedures of machining heat-resistant and refractory metals

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and alloys. In particular, it deals with metal turning, milling, boring, threading, and broaching. Suggestions are made on the selection of materials used for contact surfaces of tools, tool shapes, and efficient machining conditions. It also presents an analysis of thermal phenomena observed in the process of machining.

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SUB CODE: MM

SUBMITTED: 17Mar65 NO REF SOV: 105

OTHER: 35

Card

4/4 DP

ACC NR: AM6032372

Monograph

UR/

Belousov, A. I. (Docent, Candidate of Technical Sciences); Bobrik, P. I. (Docent, Candidate of Technical Sciences); Rakhman-Zade, A. Z. (Candidate of Technical Sciences); Silin, S. S. (Docent, Candidate of Technical Sciences); Uspenskiy, N. V. (Docent); Khvorostukhin, L. A. (Docent, Candidate of Technical Sciences); Sheryshev, V. I. (Candidate of Technical Sciences)

Thermal phenomena and machinability of aircraft materials (Teplovyye yavleniya i obrabatyvayemost' rezaniyem aviatsionnykh materialov) Moscow, Izd-vo "Mashinostroyeniye," 1966. 178 p. illus., biblio. (At head of title: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR) Errata slip inserted. 2400 copies printed.

Series note: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, vyp. 64

TOPIC TAGS: heat-resistant steel, heat-resistant alloy, heat generation, heat phenomena, gear threading, thread grinding, aircraft material, material machinability, metal machining

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LLDC: 621.910.71:669.14.018.45

ACC NR: AM6032372

PURPOSE AND COVERAGE: This book is intended for engineering personnel of machine-building plants, scientific research institutes and plant laboratories. It may also be useful for students of schools of high technical education specializing in technology. The book reviews the most important problems of heat generation in the process of machining various aircraft materials and its effect on material machinability. New methods of machining procedure are discussed on the basis of analysis of physical and mechanical properties of materials. Theoretical analysis of heat-affected zones in machining is presented along with examples of its calculation. Also discussed are specific thermal phenomena and the process of machining light-weight and copper alloys at a speed up to 10,000 m/minute. Separate chapters are devoted to an analysis of thermal phenomena and machinability relative to gear threading at thread grinding. Chapters I and IV are written by Docent P. I. Bobrik, Cand. of Tech. Sciences; Ch. II. by Docent A. I. Belousov, Cand. of Tech. Sciences; Ch. III by Docent L. A. Khvorostukhin, Cand. of Tech. Sciences; Ch. V. by Docent S. S. Silin, Cand. of Tech. Sciences; Ch. VI. by Docent N. V. Uspensky; Ch. VII by V. I. Sheryshev, Cand. of Tech. Sciences; and Ch. VIII by A. Z. Rakhman-Zade, Cand. of Tech. Sciences.

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SUB CODE: 13/ SUBM DATE: 05Mar66/ ORIG REF: 065/ OTH REF: 007/

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ACC NR: AP6036888

(A)

SOURCE CODE: UR/0122/66/000/011/0053/0054

AUTHOR: Bobrik, P. I. (Candidate of technical sciences); Rakhman-Zade, A. Z.
(Candidate of technical sciences)

ORG: none

TITLE: Hardening of the surface layer during milling at a rate of 1000-10,000 meters/minute

SOURCE: Vestnik mashinostroyeniya, no. 11, 1966, 53-54

TOPIC TAGS: metal hardening, milling machine, aluminum base alloy, copper base alloy

ABSTRACT: The article gives the results of experiments to determine the amount of hardening of the surface layer in the milling of alloys AMg7, D16T, and M2. The alloys were machined on a special single tooth milling unit. The cutting rate was varied from 1000 to 10,000 meters/min using an adjustable cutter in a rotating tool holder; the number of revolutions could be varied with an electric motor. The cutting tool was made of hard alloy VK8. The samples were milled only with a sharp cutter with the following geometric parameters: $\gamma_n = 10^\circ$; $\alpha_n = 10^\circ$; $\varphi = 45^\circ$; $R = 2$ mm. The feed and the depth were constant in all experiments ($s_n = 0.14$ mm, $t = 2$ mm). Based on the experimental results, the curves are almost identical for all three alloys. For comparatively small cutting rates (up to 1000 meters/min) the microhardness, measured

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ACC NR: AP6036888

with a PMT-3 instrument, decreases with an increase in the distance from the surface. This was most marked for copper alloy M2. For alloys AMg7 and D16T, there were weakly marked minima at $a = 0.05-0.075$ mm. The maximum degree of hardening was comparatively small; for alloy M2 it was about 5%, and for the aluminum alloys it was about 10%; the depth of the deformed layer was 0.1 mm. With an increase in the cutting rate, along with the hardening of a thin layer (10-20 microns), there was observed a considerable weakening of the material at a depth of 15-75 microns. The degree of weakening increases with an increase in the cutting rate. At rates of 2500-10,000 meters/min, the cutting temperature is close to the melting temperature of the material being worked. At small cutting rates, up to 2000 meters/min, because of the lower cutting temperature, the thickness of the weakened layer approaches zero. Orig. art. has: 1 figure.

SUB CODE: 11, 13/ SUBM DATE: none

Card 2/2

ZAKUTSKAYA, M.A.; BOBRIK, V.M.

Condensation of 5-bromo-2-furaldehyde with ketones. Dok. AN
UzSSR no.10:21-25 '58. (MIRA 11:12)

1. Sredneaziatskiy gosudarstvennyy universitet im. V.I.Lenina.
Predstavleno chlenom-korrespondentom AN UzSSR I.P.TSukervanikom.
(Furaldehyde) (Ketones) (Condensation products (Chemistry))

KONOVALOV, V.L.; BOBRIK, V.M.

Equipment for the automatic sedimentation analysis of various pulps
and suspensions; an automatic sedimentation meter. TSvet.met. 38
no.3:22-24, Mr '65.

(MIRA 18:6)

S/018/62/000/005/001/001
D047/D113

AUTHOR: Bobrikov, A., Colonel

TITLE: The effect of meteorological conditions on the flight of a rocket

PERIODICAL: Voyenny vestnik, no. 5, 1962, 84-86

TEXT: The author explains, in popular terms, how changes in meteorological factors affect the flight of an unguided rocket, and in this connection gives elementary advice on how to introduce proper corrections to data obtained from rocket firing tables. The meaning of factors such as drag coefficient, dynamic head and drag is explained, and a formula given for the latter. The effects of head, tail and side wind, and of changes in air density on the flight of a rocket during the active and passive sections of its trajectory are considered. There are 3 figures. ✓

Card 1/1

YEVGRAFOV, G.K., prof.; BOBRIKOV, B.V., dotsent; CHESTNOY, V.M., inzh.;
NOSAREV, A.V., inzh.

Experimental studies of the stressed state of reinforced concrete
joints of blocks of open spans of bridges. Trudy MIIT no.187:89-103
'64.

Experimental studies of a large-scale model of a lattice span 1.7 x 166 m.
Ibid.:104-122 (MIRA 18:7)

ANDREYEV, P.A., kand. tekhn. nauk; AFONIN, V.V., inzh.; BOBRIK W, N.I.,
inzh.; SIDORA, N.N., inzh.

Study of a screw compressor with oil injection in the operating
strip. Energomashinostroenie 10 no.10: 40-42 0 '64
(MIRA 18:2)

SOMOV, V.A., inzh.; SHUT', V.V., inzh.; BOBRIKOV, S.A., inzh.

Regulation of the inductance of arc-quenching coils using a
transformer with bias and a saturable reactor. Elek. sta. 35
no.11:46-49 N '64. (MIRA 18:1)

SHUMOV, V.A. (Gdessa); SHUT', V.V. (Odessa); MORRINOV, S.A. (Gdessa)

Arc-quenching coil with stator regulation. Elektricheskoe so. 5:24-
28 Ky '65. (MIRA 18:6)

BOBRIKOV, V.F., otv. za vyp.

[Collection of materials on the exchange of production and technological practices of the enterprises of the Volgograd Province Administration of Local Industry]
Sbornik po obmenu proizvodstvenno-tekhnicheskim opytom predpriatii Volgogradskogo Oblmestproma (mart 1962 g).
Volgograd, Volgogradskoe knizhnoe izd-vo, 1962. 31 p.
(MIRA 16:10)

1. Volgograd (Province) Oblastnoye upravleniye mestnoy promyshlennosti.

(Volgograd Province--Industries--Technological innovations)

Translation from: Referativnyy zhurnal, Geologiya, 15-1957-10-13995
p 96 (USSR)

AUTHOR: Bobrikov, V. P.

TITLE: The Phenomenological Theory of Gliding in Crystals of
Rock Salt (K fenomenologicheskoy teorii skol'zheniya v
kristallakh kamennoy soli)

PERIODICAL: Uch. zap. Leningr. gos. ped. in-ta, 1957, vol 17,
pp 54-74

ABSTRACT: Bibliographical entry

Card 1/1

Category : USSR/Radiophysics - Application of radiophysical methods

I-12

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1984
Inst : Leningrad University

Author : Troitskiy, V.S., Zelinskaya, M.R., Rakhlin, V.L., Bobrik, V.T.

Title : Results of Observation of Radio Waves from the Sun at 3.2 cm and 10 cm
During the Total Solar Eclipses of 25 February 1952 and 30 June 1954.

Orig Pub : Tr. 5-go soveshchaniya po vopr. kosmogonii. 1955, M., AN SSSR, 1956, 182-196,
diskus. 196-202

Abstract : In 1952 the observations were made at the Archman Station at wavelengths of 3.2 and 10 cm; in 1954 the observations were made near Gor'kiy at 1.5 meters and in Novomoskovsk at 3.2 and 10 cm. Measurements of the radiation, made before and after the eclipse, made it possible to estimate the sun's temperature during the day of the eclipse. In February 1952 the effective temperature was 50,000°K at 10 cm and 12,400°K at 3.2 cm. In June 1954 the effective temperature was 43,000°K at 10 cm and 11,000 at 3.2 cm. From the values obtained for the residual intensity in the total phase, it was possible to obtain the effective radii of the sun (in optical radii), namely 1.06R and 1.04R at 3.2 cm and 1.2R and 1.07R at 10 cm for 1952 and 1954 respectively. These results indicate that the chromosphere in the corona was more compressed in 1954 than in 1952, and may be a manifestation of the cyclic change in solar activity. The level causing the 10-cm radiation was reduced more (by 1.8 times) than the

Card : 1/2

Category : USSR/Radiophysics - Application of radiophysical methods

I-12

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1984

level responsible for the 3.2-cm radiation (by 1.5 times). Comparison of the 1952 eclipse curves with calculations has shown that no increase in brightness is observed at the edge of the disk at 3.2 cm, and that at 10 cm there exists a ring radiating at an intensity 1.5-2 times greater than the average value. Observations show that protruberances are radiated at 3.2 and 10cm and that in addition there are sites of increased radiation with an effective temperature of 100,000 and 400,000°K at 3.2 and 10 cm respectively and measuring 1'--2'. The article contains also many methodical indications on the performance of observations in the centimeter range.

During the discussions, A.P. Molchanov, in the name of a group of his associates at the Leningrad University, reported observations made by him on radio waves from the sun at 3.2 cm during the 1952 and 1954 eclipses. He concludes from these results that an increase in brightness is observed at 3.2 cm at the edge of the solar disk. Bibliography, 14 titles.

Card : 2/2

SOV/35-59-8-6344

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959,
Nr 8, p 35

AUTHORS: Troitskiy, V.S., Zelinskaya, M.R., Rakhlin, V.L., Bobrik, V.T. ✓

TITLE: Results of Observations of the Solar Radio-Frequency Emission
at Wave-lengths of 3.2 and 10 cm During the Total Sun's Eclipse
on February 25, 1952, and June 30, 1954

PERIODICAL: V sb.: Polnyye solnechn. zatmeniya 25 fevr. 1952 i 30 iyunya
1954, Moscow, AS USSR, 1958, p 330

ABSTRACT: See RZhAstr, 1957, Nr 1, p 489.

Card 1/1

BOBRIKOV, A., polkovnik

Influence of meteorological conditions on the flight of a rocket.
Voen.vest. 42 no.5:84-86 My '62. (MIRA 15:11)
(Rockets (Ordnance))

BOBRIKOV, A., polkovnik

Flight of an unguided rocket. Voen. vest. 41 no.4:79-81
Ap '62.

(Rockets (Ordnance))

(MIRA 15:4)

BOBRIKOV, F.A.; ZAYTSEV, A.T.; LETNEV, B.Ya., red.

[Course and diploma planning] Kursovoe i diplomnoe
proektirovanie. Moskva, Kolos, 1964. 199 p.
(MIRA 18:2)

ACCESSION NR: AT4007048

S/2598/63/000/010/0254/0261

AUTHOR: Ostrenko, V. Ya.; Bogoyavlenskaya, N. V.; Bobrikov, L. D.; Akimova, Ye. P.; Usov, V. K.; Okhramovich, L. N.; Il'vovskaya, L. A.

TITLE: Development of a production process for AT-3 titanium alloy tubes

SOURCE: AN SSSR. Institut metallurgii. Titan i yego splavy*, no. 10, 1963. Issledovaniya titanovykh splavov, 254-261

TOPIC TAGS: titanium alloy, AT-3 titanium alloy, AT-3 alloy tube, tube rolling, hot rolling, cold rolling, AT-3 titanium alloy property, titanium aluminum chromium alloy, iron containing alloy, silicon containing alloy, boron containing alloy

ABSTRACT: The effect of thermal treatment on the mechanical properties of AT-3 alloy and parameters affecting the cold and hot rolling of tubes of this alloy were investigated in the laboratories of the Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (Ukrainian Scientific-Research Institute for Tubes) and the Nikopol'skiy yuzhnotrubbyy zavod (Southern Tube Plant, Nikopol). At temperatures of 800-900C the mechanical properties and hardness of AT-3 were markedly altered by hardening in water but essentially unchanged by cooling in air or in a kiln. This effect is explained by the fixation of the intermediate $\alpha + \beta$ structure during hardening in water. These alloys demonstrated high ductility in a wide range

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ACCESSION NR: AT4007048

of rolling temperatures (1975-1125C). A maximum deformation of 55% can be attained by cold rolling of such tubes, while hot rolling of these tubes proceeds normally. The problems involved are sticking of the metal to the rolling device and the formation of a gas-saturated film on the hot rolled tube. These problems have been solved by additional mechanical treatment, such as etching, coating with an oxide film, and lubrication with a mixture of castor oil and talc. Some of these recommended procedures are discussed. Orig. art. has: 6 figures and 3 tables.

ASSOCIATION: Institut metallurgii AN SSSR (Metallurgical Institute, AN SSSR)

SUBMITTED: 00

DATE ACQ: 27Dec63

ENCL: 00

SUB CODE: MA, ML

NO REF SOV: 000

OTHER: 000

Card 2/2

BOBRIKOV, L.D.

FOMICHEV, I.A.; OSTRENKO, V.Ya.; BOBRIKOV, L.D.; MINDLIN, I.G.

Hollow mandrels with inside cooling for piercing mills. Biul.
TSNIICHM no.23:42-44 '57. (MIRA 11:2)

1.VNITI (for Fomichev, Ostrenko, Bobrikov). 2.Zakavkazskiy
metallurgicheskiy zavod (for Mindlin).
(Rolling mills)

OSTRENKO, V.Ya.; BOGOYAVLENSKAYA, N.V.; BOBRIKOV, L.D.; AKIMOVA, Ye.P.; USOV,
V.K.; OKHRAMOVICH, L.N.; IL'VOVSKAYA, L.A.

Developing a technology for the production of AT-3 titanium alloy
tubes. Titan i ego splavy no.10:254-261 '63. (MIRA 17:1)

BOBRIKOV, L. P.

Bobrikov, L. P. - "An investigation of semiconductors for measuring temperature",
Sbornik nauch. statey studentov (Rost. n/D. in-t inzhenerov zh.-d. transporta,
Issue 18), Rostov na Donu, 1949, p. 12-18.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

SOV/137-57-11-21337

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 101 (USSR)

AUTHOR: Bobrikov, N.F.

TITLE: ~~ROLLED~~ Shape Inventory Requirements for Bridge Construction
(Trebovaniya k sortamentu profiley prokata dlya mostostro-
yeniya)

PERIODICAL: V sb.: Ratsionalizatsiya profiley prokata. Moscow, Profiz-
dat, 1956, pp 168-169

ABSTRACT: The number of new rolled shapes provided for in the draft
for the inventory of angle steel of equal leg length should be
increased. The shapes should be made at intervals of 2-4 mm
by flange thickness. The inventory also lacks such essential
shapes as the 100x100x16-mm angle.

P.G.

Card 1/1

BOBRIKOV, N.F., ingh.

Using plastics in construction for the transportation industry.
Transp. stroi. 8 no.10:5-6 0 '58. (MIRA 11:11)
(Plastics)

BOBRIKOV, N.I.

Participation of students in the preservation and attraction of birds.
Biol. v shkole. no.2:70-71 M-Ap '63. (MIRA 16:4)

1. Ust'-Kazhinskaya vos'miletnyaya shkola, Krasnogorskiy rayon Altayskogo
kraya.

(Birds, Protection of)

(Student activities)

BOBRIKOV, Sergey Aleksandrovich, assistant; SOMOV, Vladimir Aleksandrovich, kand. tekhn. nauk, dotsent

Method for manufacturing the magnetic circuit of a coil with a steel core having a given dependence between magnetizing current and flux. Izv. vys. ucheb. zav.; elektromekh. 6 no.12:1332-1337 '63. (MIRA 17:1)

1. Kafedra avtomatiki i telemekhaniki Odesskogo politekhnicheskogo instituta (for Bobrikov). 2. Odesskiy politekhnicheskii institut (for Somov).

SOMOV, Vladimir Aleksandrovich, kand.tekhn.nauk, dotsent; SHUT', Vsevolod Vasil'yevich; BOBRIKOV, Sergey Aleksandrovich, assistant

Possible operation of a saturable reactor without distortion of the shape of the curve of the regulated current. Izv. vys. uch. zav.; elektromekh. 5 no.8:860-865 '62. (MIRA 15:8)

1. Odesskiy politekhnicheskiy institut (for Somov).
2. Glavnyy inzhener "Odessaenergo" Odesskogo sovnarkhoza (for Shut').
3. Kafedra avtomatiki i telemekhaniki Odesskogo politekhnicheskogo instituta (for Bobrikov).

(Magnetic amplifiers)

BOERIKOV, V. N.

Itogi elektrifikatsii Severnykh zheleznnykh dorog. [The results of electrification of Northern railroads for 1934]. (Elektrifikatsiia zhel-dor. transporta, 1934, no. 3, p. 10-14, illus.).

DLC: TF701.E27

SO: Soviet Transportation and Communications, A Bibliography. Library of Congress Reference Department, Washington, 1952, Unclassified.

BOBRIKOV, V. N.

Itogi elektrifikatsii Severnoi zheleznoi dorogi. [The results of electrification of Northern railroad]. (Elektrifikatsiia zhel-dor. transporta, 1935, no. 1, p. 12).

DLC: TF701.E27

S0: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

1ST AND
CABRIKOV, VA

The angle effect of photoelectric cells in multilayers. A. A. Holubov, *J. Sov. Phys. (U. S. S. R.)*, 1959, 12 (1957); *Chem. Zentr.*, 1958, II, 2865. The variation of the photoelectric current of the Se and the Cu_2O photoelect. cells with the angle of incidence of the x-rays was studied. If I_0 is the photoelect. current for the incident angle 0 and I_α the photoelect. current for the angle α , then $I_\alpha = (I_0 \cos \alpha)^n$, $\cos \alpha = 1 - \cos \alpha$. Here n is a const. which is the product of a linear coeff. n with the thickness d through which the rays must pass to reach the active layer. An attempt was made to verify this equation experimentally. Agreement was obtained between the course of the theoretical and the exp'tl. curves. M. G. Mosev

4

BOBRIKOV, V. P.

"Study of Temperature Dependence of Elasticity Tolerances for Various Mechanisms of Deformation and of Conditions of Formation of Fracture Cracks in Sodium Chloride Crystals." Cand Phys-Math Sci, Leningrad State Pedagogical Inst, Leningrad, 1954. (RZhFiz, Mar 55)

SO: Sum. No. 670, 29 Sep 55—Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

Struck

5679. DEPENDENCE OF THE OPTICAL LIMIT OF ELASTICITY
IN THE SYSTEM (111) (011) ON TEMPERATURE IN ROCK SALT
CRYSTALS. A.Y. BLAGOVESHCHENKO and L.K. BLAGOVESHCHENKO
Zh. tekhn. fiz., Vol. 26, No. 4, 1950, pp. 1185-1186.

639.31 : 635.55

4

MT

B

*1 - Leningradskiy gosudarstvennyy universitet
fiziko-matematicheskii fakul'tet
kafedra optiki i opticheskoy mekhaniki*

AUTHOR: BOBRIKOV, V.P. PA - 2811
 TITLE: Moistening of the Ionic Crystal Surface and Linear Deformation of Specimens. (Vliyanie smachivaniya poverkhnosti ionnykh kristallov na vybor odnoy iz ravnopravnykh sistem dodekaedricheskogo skol'zheniya pri lineynoy deformatsii obraztsov, Russian)
 PERIODICAL: Zhurnal Tekhn.Fiz. 1957, Vol 27, Nr 4, pp 830-832 (U.S.S.R.)
 Received: 5 / 1957 Reviewed: 7 / 1957
 ABSTRACT: To ascertain the location of the germs which determine the selection of the sliding zone, a series of tests were carried out on NaCl- and KCl-crystals with and without a distinct mosaic. On the occasion of tests with mosaic crystals the block boundaries were given a different orientation from those of the axis of the sample. Water was used as a stimulant with which stripes of paper were moistened and layed on as compresses. The compress method made it possible to select one of the equivalent sliding systems controlled only by means of acting on the surface layer of the sample from outside. This confirms the very important role of the state of the surface. The surface is probably the place where deformation germs are localized and decide the character of the deformation of the entire crystal. The water stimulates the development of the micro-gap on the moistened surfaces in the direction of that zone, the axis of which is vertical to the moist surfaces. This develops into gliding motion in a zone and promotes the development of the same germs on the dry surfaces of the gap along the

Card 1/2

PA - 2811
Moistening of the Ionic Crystal Surface and Linear Deformation of
Specimens.

connecting surface. (3 Illustrations and 2 Citations from Slav
publications).

ASSOCIATION: LFTI
PRESENTED BY:
SUBMITTED: 10.9.1956
AVAILABLE: Library of Congress

Card 2/2

BOBRIKOV, V.P.

Effect of wetting the surfaces of ionic crystals on the selection of one of the equivalent dodecahedral glide systems during linear deformation of specimens. Uch zap. Ped inst Gerts. 197:126-129 '58.

(MIRA 16:9)

(Ionic crystals)
(Deformations (Mechanics))

ACC NR: AR6035048 SOURCE CODE: UR/0058/66/000/008/E044/E044

AUTHOR: Bobrikov, V. P.

TITLE: Plastic flow of ionic crystals

SOURCE: Ref. zh. Fizika, Abs. 8E326

REF SOURCE: Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, v. 265, 1965, 332-338

TOPIC TAGS: ionic crystal, plastic flow, sodium chloride crystal, potassium chloride crystal, solid state, crystal plastic flow

ABSTRACT: In tensile tests at temperatures above 250C sodium chloride and potassium chloride monocrystals exhibited plastic flow, accompanied by the formation of submicroscopic convoluted lines or "rivulets" on the surface, developing from one edge to another. The width of the "rivulets" was found to increase under stress up to $\sim 2 \cdot 10^{-3}$ cm. There are no "rivulets" inside the crystal, which is apparent when the surface of a freshly broken fragment is examined. A microscopic study was made of the development of the "rivulets", their structure, and

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ACC NR: AR6035048

their inter-relationship. The "rivulets" were found to form ordinarily on wide faces; on the other hand, narrow faces were found to thin-down during flow and to become covered with thin rectilinear lines or lines of slip. A correspondence was observed between rivulets on opposite faces and the lines of slip connecting them. The authors believe that the formation of the rivulets is related to the emergence of an aggregate of slip surfaces on the surface, displaced by a large number of translation steps relative to each other. E. Gutmanas. [Translation of abstract]

SUB CODE: 20/

[SP]

Card 2/2

BOBRIKOVA, T.I.; MITYUKOVICH, N.A.

Boards from sawdust. Der. prom. 13 no.6:23 Je '64.

(MIRA 17:6)

1. Tomskaya karandashnaya fabrika.

BOBRIKOVA, V. N.

BURKOVSKAYA, Ye.Kh.; nauchnyy sotrudnik; IGRUNOV, V.D., nauchnyy sotrudnik;
MECHAYEV, I.N., nauchnyy sotrudnik; BOBRIKOVA, V.N.; TERKINT'YEVA,
T.N.; SHCHERBAKOVA, L.F.; BERLIN, I.A., otv.red.; KITAYTSEV, A.M.,
red.; KUZ'MIN, L.A., red.; OLIMPOV, V.G., red.; SKITEYKIN, I.S.,
red.; RUSIN, N.P., red.; MARTYNOV, S.I., red.; SIMONOV, Ya.P.,
red.; IVANOV, A.P., red.; BESSONOV, N.P., red.; YASNOGORODSKAYA,
M.M., red.; VLADIMIROV, O.G., tekhn.red.

[Directions for hydrometeorological stations and posts] Nastavlenie
gidrometeorologicheskim stantsiham i postam. Leningrad, Gidrometeor.
(Continued on next card)

BURKOVSKAYA, Ye.Kh.---(continued) Card 2.

izd-vo. No.3, pt.2. [Working up materials of meteorological
observations] Obrabotka materialov meteorologicheskikh
nabliudenii. 1958. 85 p. (MIRA 13:1)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeoro-
logicheskoy sluzhby. 2. Glavnaya geofizicheskaya observatoriya im.
A.I.Voyeykova (for Burkovskaya, Igrunov, Nechayev). 3. Starshiye
inzhnery Nauchno-issledovatel'skogo instituta aeroklimatologii
(for Bobrikova, Terent'yeva). 4. Glavnoye upravleniye Gidrometeo-
rologicheskoy sluzhby SSSR (for GUGMS) (for Kitaytsev, Kuz'min,
Olimpov, Skiteykin). 5. Glavnaya geofizicheskaya observatoriya (GGO)
(for Berlin, Nechayev, Rusin, Shcherbakova). 6. Upravleniye gidro-
meteorologicheskoy sluzhby (UGMS) (for Martynov, Simonov, Ivanov,
Bessonov).

(Meteorology--Observers' manuals)

BOBRIN, O.N.; SAYADOV, B.A.; SVERDLIN, D.I.; CHINNOV, Yu.V.

Lathe with a single-reading pulsed system of numerical program
control. Stan. i instr. 36 no.4:12-15 Ap '65. (MIRA 18:5)

J124000-66 EWT(1)/EWA(h)

ACC NR: AP6009906

SOURCE CODE: UR/0413/66/000/004/0105/0105

AUTHOR: Litvin, P. A.; Burdanov, V. S.; Bobrin, V. Ye.

ORG: none

TITLE: A code pulse shaper²⁵ Class 42, No. 179091

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 105

TOPIC TAGS: pulse shaper, pulse coding, remote control

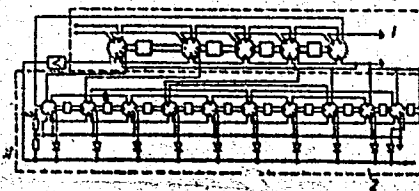
ABSTRACT: This Author's Certificate introduces a code pulse shaper designed for generating sequence codes in radio electronics, e. g. in remote control. The unit contains two registers based on ferrite-transistor elements and a commutator for making the logical connections between registers. The resistance to interference is increased by connecting the output circuits of each cell in the first register to the commutator which switches them to the readout winding of the cells in the second register in accordance with the values of the succeeding digit of the code which has a constant number of digits and discrete time intervals which vary in number to represent each digit.

UDC: 681.142.07

Card 1/2

L 24000-66

ACC NR: AP6009906



1--first register; 2--second register

SUB CODE: 09/

SUBM DATE: 19Jan61/

ORIG REF: 000/

OTH REF: 000

Card 2/2 *pla*

ACC NR: AT6022267

SOURCE CODE: UR/0000/66/000/000/0024/0024

AUTHOR: Mikaelyan, A. L. (Doctor of technical sciences, Professor); Bobrin, V.I.

ORG: none

TITLE: Use of lasers to form three-dimensional images

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya kvantovoy elektroniki. Doklady. Moscow, 1966, 24

TOPIC TAGS: laser application, laser optics, laser photography, hologram

ABSTRACT: Methods of forming three-dimensional images with coherent light are discussed. It is shown that these methods will produce high quality reproduction of images since the resolution at the image is limited only by diffraction at the aperture and the size of the hologram or interferogram is equal to the size of the aperture. Some experimental results are described. [Abstracter's note: This is essentially the entire text of the article].

SUB CODE: 20 / SUBM DATE: 11Apr66

Card 1/1

NADIROV, N.K.; BOBRINETSKAYA, R.V.

Use of acetone in the extraction of soy-bean oil. Izv. vys.
ucheb. zav.; pishch. tekhn. no.4:58-60 '63. (MIRA 16:11)

1. Khabarovskiy pedagogicheskiy institut, kafedra khimii.

24(3), 9(3)

SOV/20-123-4-15/53

AUTHORS: Bobrinev, V. , Braginskiy, V.

TITLE: The Radiation ~~From~~ a Point Charge Uniformly Moving Along the Axis of a Round Hole in an Infinite Ideally Conducting Plane (Izlucheniye tochechnogo zaryada, ravnomerno dvizhushchegosya po osi kruglogo otverstiya v bezkonechnoy ideal'no provodyashchey ploskosti)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 634-636 (USSR)

ABSTRACT: The authors investigated the radiation of a point charge e_0 uniformly moving with velocity v along the axis of a circular hole with the radius r_0 in an infinite ideally conducting plane. $v/c \ll 1$ is assumed, where c denotes the velocity of light. The ideally conducting plane with the hole is assumed to be located in the plane $z = 0$, and the solution for $z > 0$ is sought for reasons of certainty. In order to determine the field strength \vec{E} in the wave zone, it is necessary to solve an inhomogeneous wave equation with inhomogeneous boundary conditions. \vec{E} may be set up in the form $\vec{E} = \vec{E}_1 + \vec{E}_2$, where \vec{E}_1 denotes the solution of the in-

Card 1/4

SOV/20-123-4-15/53

The Radiation of Point Charge Uniformly Moving Along the Axis of a Round Hole in an Infinite Ideally Conducting Plane

homogeneous equation with homogeneous boundary conditions, and \vec{E}_2 - the solution of the homogeneous equation with inhomogeneous boundary conditions. The first part of the problem is reduced to determining the radiation field of the point charge e , occurring in the plane $z = 0$ and moving along the z axis with constant velocity. This is the so-called "transition radiation" during transition of the charge from the metal into the vacuum. The solution of the first part of this problem is explicitly written down. For the solution of the second part of the problem it is necessary to determine the radiation field from the known distribution of the tangential components of the field on the plane $z = 0$. Solving of this mixed boundary value problem is rather complicated. The problem investigated here can be reduced to the first boundary value problem. For time-harmonic fields its solution has the form

$$\vec{E}_2(M) = \int_S \vec{E}''(M, P, \vec{A}^1) dS.$$

Card 2/4

Here $\vec{E}_2(M)$ denotes the field strength at point M ; $\vec{E}''(M, P, \vec{A}^1)$ -

SOV/20-123-4-15/53

The Radiation of Point Charge Uniformly Moving Along the Axis of a Round Hole in an Infinite Ideally Conducting Plane

field strength produced at point M by a punctiform magnetic dipole with the force $\vec{A}' = (1/4\pi) [\vec{E} \vec{n}]$. This dipole is assumed to be at point P on the ideally conductive surface S. In the here investigated case the expression under the integral sign is different only for the aperture of zero. The further course taken by calculations is outlined in short. The radiation of the aperture and of the charge do not depend upon the direction of charge motion. The presence of a hole weakens the dipole-like part of the transition radiation, especially the higher frequencies. The existence of a hole in the screen restricts the radiation spectrum on the side of high frequencies and thereby the total energy radiated becomes finite. The authors then give a formula and a diagram for the ratio between the spectral density of the energy radiated in one half of the space and the spectral energy of transition radiation. There are 2 figures and 3 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
Card 3/4 (Moscow State University imeni M. V. Lomonosov)

BOBRINEV, V.; PARYGIN, V.

Light wave generators and amplifiers. Radio no.7:24-27 J1 '61.
(MIRA 14:10)
(Masers)

L 45785-66

ACC NR: AP6031985

5
from different elements of the hologram, and the background is the result of addition of waves scattered by individual emulsion grains, with random phases. To check on the formula the authors experimented with production of holograms and reconstruction of three-dimensional images on different emulsions. The holograms were taken with a single-mode gas laser of ~2.5 MW power; the exposures were several minutes and the hologram dimensions 9 x 12 cm. The images were reconstructed with an IG-75 laser operating in the multimode regime at a power 20-25 MW. The calculations and the experiments show that the graininess of the emulsion influences not only the resolving power of the image, but also, more importantly, the level of the background that distorts the brightness distribution in the image. The authors thank I. R. Protas and G. P. Feyerman who supplied the photographic plates, and Yu. G. Turkov, I. V. Patapov, and L. N. Razumov for great help with the experimental research. [02]
Orig. art. has: 1 figure and 1 formula.

SUB CODE: 20/ SUBM DATE: 14Jun66/ OTH REF: 004/ ATD PRESS: 5084

Card 2/2 pb

BOBRINSKAYA, Q.G.; BOBRINSKIY, V.M.; BUKATCHUK, P.D.; DANICH, M.M.;
KAPTSAN, V.Kh.; NEGADAYEV-NIKONOV, K.N.; POPOVA, T.V.;
ROSHKA, V.Kh.; SAFAROV, E.I.; SOBETSKIY, V.A.; EDEL'SHTEYN,
A.Ya.; BURGELYA, N.K., red.; DRUMYA, A.V., red.; KUZNETSOVA,
E., red.

[Stratigraphy of sedimentary formations in Moldavia] Strati-
grafiia osadochnykh obrazovani Moldavii. Kishinev, Kartia
moldoveniaske, 1964. 129 p. (MIRA 19:1)

1. Otdel paleontologii i stratigrafii AN Moldavskoy SSR (for
Bobrinskaya, Danich, Negadayev-Nikonov, Popova, Roshka,
Sobetskiy). 2. Institut geologii i poleznykh iskopayemykh,
gorod Kishinev (for Bobrinskiy, Edel'shteyn). 3. Upravleniye
geologii i okhrany neдр pri Sovete Ministrov Moldavskoy SSR
(for Bukatchuk, Kaptsan, Safarov).

BOGDANOV, A.A., red.; MURATOV, E.V., red.; SHATSKIY, N.S., red.
[deceased]; DOLITSKIY, A.V., red.; CHUMACHENKO, Z.N.,
red.; BOBRINSKAYA, V.A., red.

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